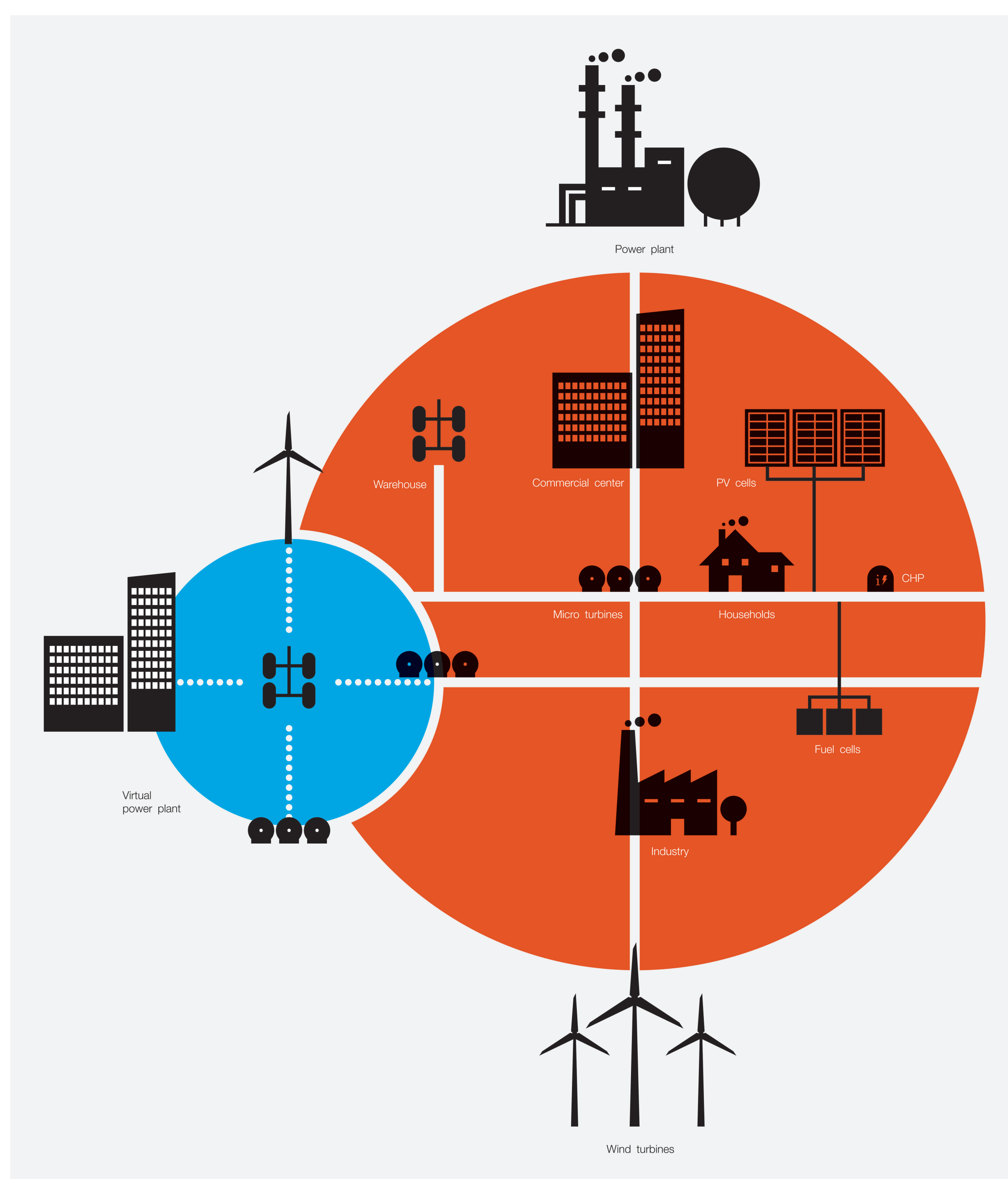


# SET-Plan Conference 2010

3rd and 4th of June 2010, Madrid, Spain



## International Demand Response Demonstration Centres – KIBERnet



Virtual Power Plant as an integral part of future electricity networks.

### Overall Objectives and Budget

The KIBERnet system remotely manages electricity consumption and distributed generation across a network of industrial and commercial prosumer sites. It provides improved informatization of electricity transmission and distribution network and enables its better responsiveness. It is a Virtual Power Plant (VPP) for effectively managing arising challenges in balancing the supply and demand in the electricity system.

Total R&D and Demonstration Budget is 2.914.100 €.

**"Managing consumption and distributed generation across a network of industrial and commercial prosumers"**

### Technical Barriers and Targets

Computer algorithms for managing a wide range of different industrial loads without harmful influence to the production process are an important objective. They influence the total capacity of the VPP and its financial effectiveness.

Communication security and interconnectivity is another issue which has to be tackled in order to achieve true interoperability of the VPP.

### Technical accomplishments / progress / results

The system is fully automatic with support for different pricing schemes: fixed, dynamic and

real-time. With proprietary e-negotiations technology it enables formation of different kinds of electronic electricity markets: day ahead, intraday and balancing.

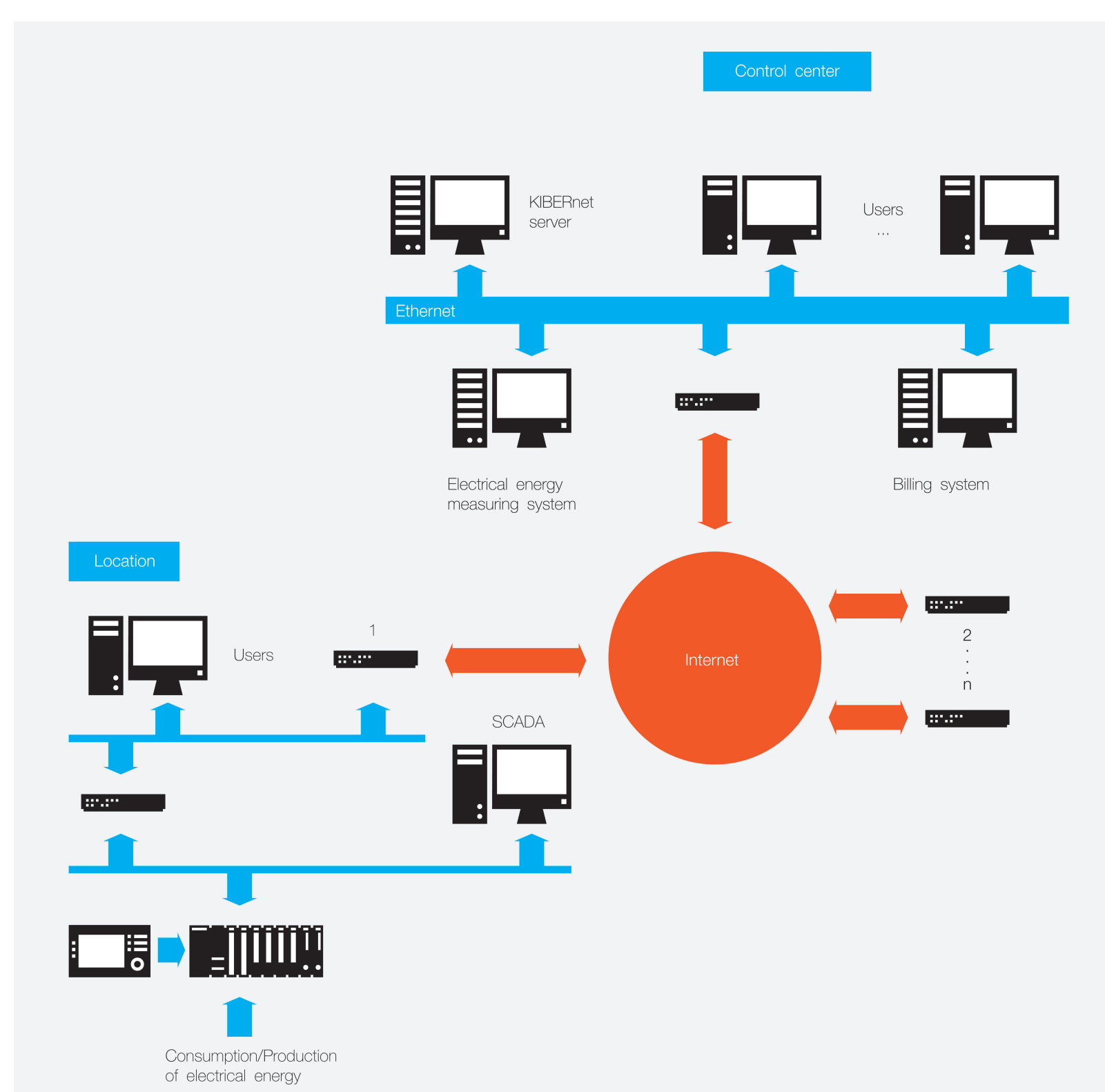
### Future Work

On the base of all R&D results there will be established three International Demand Response Demonstration Centres to establish a realistic environment for VPP. These are going to be located in Vienna (Austria), Ljubljana (Slovenia) and Atlanta (USA).

### Conclusions and major findings

KIBERnet system offers demand response solution, whereby it monitors electricity consumption and automatically sheds electricity loads to reduce their usage during these same peak periods. This helps optimize the balance of electric supply and demand. It

creates a significant financial savings for all user groups: network system operators, suppliers and prosumers.



Schematic overview of the KIBERnet system – the SmartGrids technology.

### Project Overview

#### Coordinator/ Lead investigator:

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#### List of partners:

- Jozef Stefan Institute
- Electric Power Research Institute Milan Vidmar
- University of Ljubljana, Faculty of Electrical Engineering.

#### Duration:

From 01/2008 to 12/2011.

#### Website of the project:

www.kiber-net.com